

TEMPORAL ANALYSIS FOR EXAMPLE VIDEO AND FILM-TO-VIDEO IMAGE FORMATS AND ESTIMATES OF THE TRANSMISSION TIME AVAILABLE FOR OTHER USES (e.g. CONCURRENT WIRELESS USAGE) OF THE SPECTRUM.

All figures are estimated or nominal values. Time domain calculations are approximate and intended as illustrative examples.

| EXAMPLE IMAGE FORMATS | ASPECT RATIOS: "H - NORMALIZED" | | ASPECT RATIOS: "W - NORMALIZED" | | "LETTERBOX" BLACK LINES FOR NTSC 525 (DISPLAYED BLACK) | | TEMPORAL ANALYSIS 1: TIME ALLOTTED TO NTSC SYNC & BLANKING (NON-DISPLAYED AREA) | | TEMPORAL ANALYSIS 2: TIME ALLOTTED TO ACTIVE VIDEO (DISPLAYED CONTENT) | | TEMPORAL ANALYSIS 3: TIME AVAILABLE FOR OTHER USES, i.e. an Embodiment of this Invention. | |
|------------------------------|------------------------------------|--------|------------------------------------|--------|--|---------|--|--|---|---------|--|--|
| | WIDTH | HEIGHT | WIDTH | HEIGHT | Lines | Percent | t1 μ S per Field x 60 = t1 μ S per Second | t2 μ S per Field x 60 = t2 μ S per Second | t3 μ S per Sec. | Percent | | |
| <u>VIDEO (TELEVISION)</u> | 1.33 | 1 | 1 | 0.75 | 0.0 | = 0 | 232,145.00 | 767,855.19 | Useful at keyed insert or blanking. | 19.20 | | |
| | 1.78 | 1 | 1 | 0.56 | 120.8 | 25.0 | 232,145.00 | 575,891.18 | 197963.8 | | | |
| <u>FILM</u> | | | | | | | | | | | | |
| | 3.00 | 1 | 1 | 0.33 | 268.3 | 55.6 | 232,145.00 | 341,268.89 | 426586.1 | 42.66 | | |
| CINERAMA* (4 variations): | 2.77 | 1 | 1 | 0.36 | 250.5 | 51.9 | 232,145.00 | 369,605.29 | 398249.7 | 39.82 | | |
| | 2.75 | 1 | 1 | 0.36 | 248.8 | 51.5 | 232,145.00 | 372,293.33 | 395561.7 | 39.56 | | |
| CINEMASCOPE* (3 variations): | 2.59 | 1 | 1 | 0.39 | 234.4 | 48.5 | 232,145.00 | 395,292.15 | 372562.9 | 37.26 | | |
| | 2.66 | 1 | 1 | 0.38 | 240.9 | 49.9 | 232,145.00 | 384,889.72 | 382965.3 | 38.30 | | |
| VISTAVISION* (3 variations): | 2.55 | 1 | 1 | 0.39 | 230.5 | 47.7 | 232,145.00 | 401,492.81 | 366362.2 | 36.64 | | |
| | 2.35 | 1 | 1 | 0.43 | 209.0 | 43.3 | 232,145.00 | 435,662.41 | 332192.6 | 33.22 | | |
| TODD-AO* (2 variations): | 1.96 | 1 | 1 | 0.51 | 154.4 | 32.0 | 232,145.00 | 522,350.34 | 245504.7 | 24.55 | | |
| | 1.85 | 1 | 1 | 0.54 | 134.9 | 27.9 | 232,145.00 | 553,409.01 | 214446.0 | 21.44 | | |
| TECHNIRAMA*: | 1.66 | 1 | 1 | 0.60 | 95.0 | 19.7 | 232,145.00 | 616,751.00 | 151104.0 | 15.11 | | |
| | 2.35 | 1 | 1 | 0.43 | 209.0 | 43.3 | 232,145.00 | 435,662.41 | 332192.6 | 33.22 | | |
| ULTRA PANAVISION 70*: | 2.20 | 1 | 1 | 0.45 | 190.3 | 39.4 | 232,145.00 | 465,366.67 | 302488.3 | 30.25 | | |
| | 2.35 | 1 | 1 | 0.43 | 209.0 | 43.3 | 232,145.00 | 435,662.41 | 332192.6 | 33.22 | | |
| PANAVISION* (2 variations): | 2.76 | 1 | 1 | 0.36 | 249.7 | 51.7 | 232,145.00 | 370,944.44 | 396910.6 | 39.69 | | |
| | 2.35 | 1 | 1 | 0.43 | 209.0 | 43.3 | 232,145.00 | 435,662.41 | 332192.6 | 33.22 | | |
| SUPER 35* (2 variations): | 1.85 | 1 | 1 | 0.54 | 134.9 | 27.9 | 232,145.00 | 553,409.01 | 214446.0 | 21.44 | | |
| | 2.35 | 1 | 1 | 0.43 | 209.0 | 43.3 | 232,145.00 | 435,662.41 | 332192.6 | 33.22 | | |
| <u>OTHER ADAPTATION</u> | 2.10 | 1 | 1 | 0.48 | 176.3 | 36.5 | 232,145.00 | 487,526.98 | 280328.0 | 28.03 | | |
| | | | | | | | | | | | | |
| "PAN & SCAN" FOR NTSC*: | 1.33 | 1 | 1 | 0.75 | 0.0 | = 0 | 232,145.00 | 767,855.19 | Useful at keyed insert or blanking. | | | |

* Asterisk indicates potential Trademarks / service marks of the respective motion picture format owners.

APPENDIX TABLE I